

**TKN Micro-Kjeldahl Digestion and Distillation****SM 4500-N<sub>org</sub> C – 1997 (2011)**

*ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 4020.*

Facility Name: \_\_\_\_\_ VELAP ID \_\_\_\_\_

Assessor Name: \_\_\_\_\_ Analyst Name: \_\_\_\_\_ Inspection Date \_\_\_\_\_

Records Examined: SOP Number/ Revision/ Date \_\_\_\_\_ Analyst: \_\_\_\_\_

Sample ID: \_\_\_\_\_ Date of Sample Preparation: \_\_\_\_\_ Date of Analysis: \_\_\_\_\_

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Are sample volumes selected according to the expected organic nitrogen in samples? [ 4- 40 mg/L= 50 mL sample      8- 80 mg/L=25 mL sample] [20-200 mg/L=10 mL sample      40-400 mg/L= 5 mL sample]	4500-N <sub>org</sub> C.4.a				
Are wet portions of sludge or sediment samples used for kjeldahl nitrogen determination? [NOTE: Measure dry weight on a separate aliquot of sample.]	4500-N <sub>org</sub> C.4.a				
Is ammonia removal performed by adding 3 mL borate buffer, then adding 6N sodium hydroxide until pH 9.5, and then boiling? [NOTE: Not required if ammonia is separately determined and subtracted from final results.]	4500-N <sub>org</sub> C.4.b				
<b>Digestion</b>					
Is 10 mL digestion reagent added to each flask along with boiling beads or chips?	4500-N <sub>org</sub> C.4.c				
Are samples boiled briskly at medium heat until solution is transparent, pale green and copious white fumes are observed?	4500-N <sub>org</sub> C.4.c				
After fumes are observed, are samples digested for an additional 30 minutes at the maximum heat setting?	4500-N <sub>org</sub> C.4.c				
Following digestion, are samples cooled, diluted to no more than 30 mL with deionized water, and mixed?	4500-N <sub>org</sub> C.4.c				
<b>Distillation</b> (Not required if use block digestion per 40 CFR 136.3 Footer 20)					
Is 10 mL hydroxide-thiosulfate reagent added to each sample?	4500-N <sub>org</sub> C.4.d				
Are samples distilled with the vertical condenser's outlet tip submerged below the surface of the receiving acid solution? [NOTE: Distillation not required if using block digestion]	4500-N <sub>org</sub> C.4.d [40 CFR 136.3]				
Is 30-40 mL of distillate collected in 10 mL of the appropriate absorbent solution for the specified determinative method? Titrimetric determination: indicating boric acid solution Phenate or ISE method: 10 mL 0.04N H <sub>2</sub> SO <sub>4</sub>	4500-N <sub>org</sub> C.4.d 4500-N <sub>org</sub> C.4.f				
Are reagents blanks and standards carried through all steps of the procedure and the necessary correction applied to results?	4500-N <sub>org</sub> C.4.e				

Notes/Comments: